

SANDY BEACH RESORT (PWS 1090062) SOURCE WATER ASSESSMENT REPORT

January 29, 2001



State of Idaho Department of Environmental Quality

Disclaimer: This publication has been developed as part of an informational service for the source water assessments of public water systems in Idaho and is based on data available at the time and the professional judgement of the staff. Although reasonable efforts have been made to present accurate information, no guarantees, including expressed or implied warranties of any kind, are made with respect to this publication by the State of Idaho or any of its agencies, employees, or agents, who also assume no legal responsibility for the accuracy of presentations, comments, or other information in this publication. The assessment is subject to modification if new data is produced.

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live.

This report, *Source Water Assessment for Sandy Beach Resort (PWS 1090062)* located near Cocolalla, Idaho, describes the public drinking water system, the associated potential contaminant sources located within a 1,000' boundary around the drinking water source, and the susceptibility (risk) that may be associated with any associated potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and is not intended to undermine the confidence in your water system.**

The Sandy Beach Resort drinking water system consists of one dug well located in the northwest corner of Johnson's Lakeside Lots #3. The well is 3' in diameter and 30' deep. At the time of the last sanitary survey, completed in 1998, the well was not in compliance with the Idaho Rules for Public Drinking Water Systems. The well is located approximately 350' from Cocolalla Lake. In 1999 the well was determined to be under the direct influence of surface water (GWUDI) and is required to be filtered and treated accordingly.

The well was assigned a high construction score, reflecting a general lack of information about the well in the form of a well log. Additionally, information obtained from the well's 1998 sanitary survey indicates that the well is in a state of disrepair. Its shallow nature and lack of protection against surface water runoff make it extremely vulnerable to contamination. The well also received a high hydrologic sensitivity score because of the geologic conditions in the area surrounding the well. The area's soils are well drained, which allows for easy movement of contaminants through the soil. The well's depth of 30' precludes the existence of a significant layer of clay over the aquifer that might act as a barrier to contamination moving from the ground surface to the water table.

There are a total of seven potential contaminant sites located within the delineated source water assessment area. All sites are potential sources of microbial contamination. All but two of the sites are also potential sources of inorganic chemicals in the form of nitrate. As a result, the well received moderate potential contaminant/land use scores in the categories of inorganic chemicals and microbial contaminants. In the categories of volatile organic chemicals and synthetic organic chemicals the well received low scores. This reflects the lack of sources of these types of contaminants within the source water assessment area. A copy of the susceptibility analysis for your system along with a map showing any potential contaminant sources is included with this summary. Information regarding the potential contaminants within the 1,000' boundary have been summarized and included in Table 1.

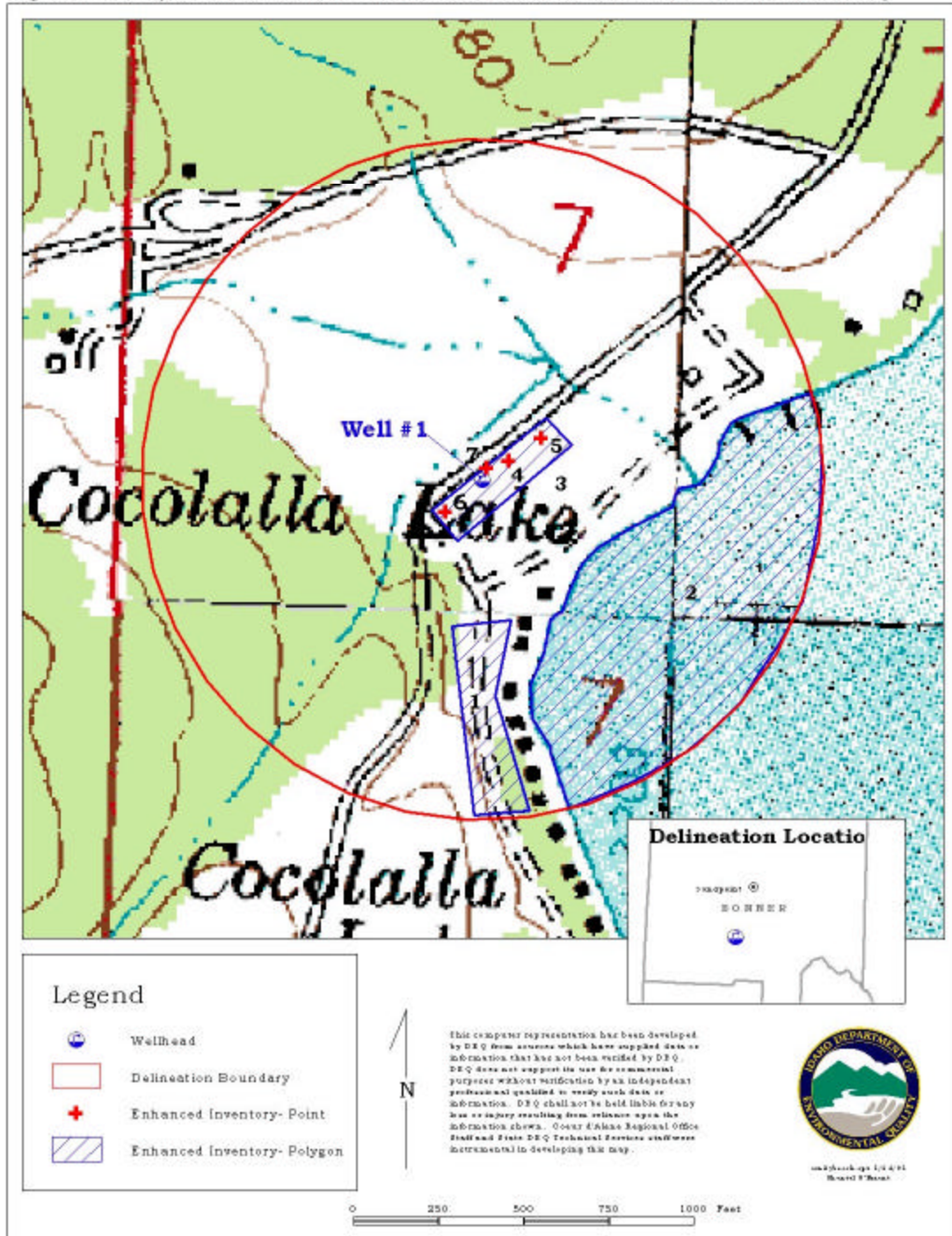
Table 1.

SITE #	Source Description	Source of Information	Potential Contaminants
1	Septic System	Enhanced Inventory	IOC, Microbial
2	Surface Water	Enhanced Inventory	Microbial
3	Septic System	Enhanced Inventory	IOC, Microbial
4	Septic Tank	Enhanced Inventory	IOC, Microbial
5	Septic Tank	Enhanced Inventory	IOC, Microbial
6	Septic Tank	Enhanced Inventory	IOC, Microbial
7	Abandoned well	Enhanced Inventory	Microbial

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

In terms of the total susceptibility score, the well was assigned moderate scores in the volatile organic chemical and synthetic organic chemical categories. The final susceptibility scores are a combination of the well's construction score, hydrologic sensitivity score and potential contaminant/land use scores. The abandoned well, a septic system and one of the documented septic tanks located within the Sandy Beach source water assessment area are located within the sanitary setback for drinking water wells. In accordance with Idaho's Source Water Assessment Plan, the well received automatic high susceptibility scores in the microbial and inorganic chemical categories because of the presence of these contaminants.

Figure 1. Sandy Beach Resort Delineation Location and Potential Contaminant Inventory



This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

As a first step towards source water protection, Sandy Beach Resort should make a serious attempt to comply with Idaho Rules for Public Drinking Water Systems. This should include abandoning the existing well site and replacing it with another source of drinking water as requested by Mike Nelson of Panhandle Health District 1 in February of 2000. Until the current well is abandoned, source water protection activities should focus on implementation of practices aimed at minimizing the risk of microbial contamination of the well. This includes ensuring proper management of septic systems located near the well. The abandoned well located near the dug well should be sealed according to Idaho Department of Water Resources guidelines. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact Alan Miller at the Coeur d’Alene regional IDEQ office at (208) 769-1422.

DEQ Website:

<http://www.deq.state.id.us>

Attachment A

Sandy Beach Resort Susceptibility Analysis Worksheet

Ground Water Final Susceptibility Scoring

0-5 = Low Susceptibility

6-12 = Moderate Susceptibility

13-18 = High Susceptibility

1. System Construction

SCORE

Drill Date	1975	
Driller Log Available	NO	
Sanitary Survey (if yes, indicate date of last survey)	YES	1998
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	NO	1
Casing and annular seal extend to low permeability unit	NO	2
Highest production 100 feet below static water level	NO	1
Well located outside the 100 year flood plain	NO	1

Total System Construction Score 6

2. Hydrologic Sensitivity

Soils are poorly to moderately drained	NO	2
Vadose zone composed of gravel, fractured rock or unknown	YES	1
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2

Total Hydrologic Score 6

3. Potential Contaminant / Land Use - ZONE 1A

IOC Score VOC Score SOC Score Microbial Score

Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	YES	NO	NO	YES

Total Potential Contaminant Source/Land Use Score - Zone 1A 0 0 0 0

Potential Contaminant / Land Use - ZONE 1B

Contaminant sources present (Number of Sources)	YES	5	0	0	7
(Score = # Sources X 2) 8 Points Maximum		8	0	0	8
Sources of Class II or III leachable contaminants or	YES	5	0	0	
4 Points Maximum		4	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B Less Than 25% Agricultural Land		0	0	0	0

Total Potential Contaminant Source / Land Use Score - Zone 1B 12 0 0 8

Cumulative Potential Contaminant / Land Use Score 12 0 0 8

4. Final Susceptibility Source Score

15 12 12 15

5. Final Well Ranking

High Moderate Moderate High

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **Superfund**, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System)

– Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25% of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RCRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.